

**МІНІСТЕРСТВО ОХОРОНИ ЗДОРОВ'Я УКРАЇНИ
БУКОВИНСЬКИЙ ДЕРЖАВНИЙ МЕДИЧНИЙ УНІВЕРСИТЕТ»**



МАТЕРІАЛИ

**105-ї підсумкової науково-практичної конференції
з міжнародною участю
професорсько-викладацького персоналу
БУКОВИНСЬКОГО ДЕРЖАВНОГО МЕДИЧНОГО УНІВЕРСИТЕТУ
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Матеріали підсумкової 105-ї науково-практичної конференції з міжнародною участю професорсько-викладацького персоналу Буковинського державного медичного університету, присвяченої 80-річчю БДМУ (м. Чернівці, 05, 07, 12 лютого 2024 р.) – Чернівці: Медуніверситет, 2024. – 477 с. іл.

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У збірнику представлені матеріали 105-ї підсумкової науково-практичної конференції з міжнародною участю професорсько-викладацького персоналу Буковинського державного медичного університету, присвяченої 80-річчю БДМУ (м. Чернівці, 05, 07, 12 лютого 2024 р.) із стилістикою та орфографією у авторській редакції. Публікації присвячені актуальним проблемам фундаментальної, теоретичної та клінічної медицини.

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distribution of patients: total after an MI - 45, of which there are 17 patients with non-Q MI (37.7%), 28 patients with Q MI (62.2%). Evaluation of hemodynamic parameters was performed by determining the common ejection fraction of the left ventricle (LVEF) and calculating the regional ejection fraction (RLVEF) using the proprietary software "SmartUZD" with the possibility of computer processing of the digitized ultrasound image of the heart chambers during the loading antiorthostatic stress test - raising the lower limbs to an angle of 45°. The results of the survey were analyzed with the determination of average values and root mean square deviation. Non-parametric Wilcoxon rank tests were used for data whose distribution law differed from normal. For data whose distribution law was normal, Student's t-test was used.

Results. The analysis of changes in RLVEF parameters before and after the loading test in the group with Q MI showed a tendency to decrease the contractile capacity of the LV after loading in most segments with significant changes in RLVEF 1,4,6 (32.30 ± 3.20 vs. 27.77 ± 4.44 , 58.30 ± 6.39 vs. 39.77 ± 8.41 , 32.26 ± 3.92 vs. 25.52 ± 5.24 , $p < 0.05$) and RLVEF 5 (60.04 ± 5.12 versus 28.67 ± 7.50 , $p < 0.01$). These changes were expected due to a larger zone of myocardial damage. Regarding the results of the stress test in the group of patients with non-Q MI, with a general distortion of the shape of the curve, an unreliable increase in the values of segmental contractility in the area of the apex, lower and middle sections of the anterolateral wall of the LV, with a slight decrease in the mobility of the interventricular membrane was established. These changes can be preliminarily interpreted as compensatory.

After undergoing rehabilitation measures, the analysis of RLVEF was again performed in the same groups with a comparison of the results obtained before and after the load test. The analysis of the change in RLVEF in the non-Q-MI group showed a tendency towards an increase in myocardial contractility indicators in the middle part of the interventricular membrane and the anterior wall of the LV with significant changes in RLVEF8 (31.73 ± 3.03 vs. 38.30 ± 2.27 , $p < 0.05$). Values of RLVEF in the Q-IM group had an unreliable decrease in segments of RFV3, 4, 9, 10 ($p > 0.1$), and practically did not change in other segments.

Conclusions. Thus, when performing a stress test to determine the regional contractility of the myocardium, an assessment of the state of contractility before and after rehabilitation in the indicated groups of patients was carried out, which allows to evaluate its effectiveness and performing control at various stages of rehabilitation.

Ivashchuk S.I.

THE PREDICTING METHOD OF DIABETIC FOOT SYNDROME COMPLICATED COURSE AND ULCER OCCURRENCE

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Introduction. The medical community around the world recognized diabetes mellitus (DM) as the most important non-infectious disease, the prevalence of which has become a pandemic. In the structure of late complications of diabetes, diabetic foot syndrome (DFS) is observed in 4.6-25% of patients, holding a leading position and causing disability and increased mortality of this group of patients. According to The International Diabetes Federation in 25-47% of cases, hospitalization of patients with DM is associated with damage of the feet. Chronic wound defects of the lower extremities are observed in 15-25% of the patients with DFS, serving as a direct cause of "high" amputations of the lower extremities in 12% of these patients.

The aim of the study: to develop a new predicting method of the DFC course severity and the trophic ulcers occurrence.

Material and Methods. The study included patients with DFS (43 persons). The formula $IRB = (\text{number of leukocytes (thousand/l)} * \text{age}) / LIImO$ was used in the study. The number of leukocytes of peripheral blood obtained in the general blood test and the age of the patient are substituted into the numerator. The denominator is substituted with the data of the leukocyte index intoxication in the modification of Ostrovsky (LIImO), calculated by the formula $LIImO = ((\text{myelocytes} + \text{plasma cells} + \text{metamielocytes} + \text{Band neutrophils} + \text{Segmented neutrophils}), \%) /$

((lymphocytes+monocytes+eosinophils+basophils),%). The peripheral blood IRB score was determined.

Results. According to the results of the study, it was found that in patients with DFS there is a difference of the IRB levels depending on the presence or absence of trophic ulcer. For DFS without trophic ulcer, the average IRB was 59.90 ± 2.87 , while for DFS with trophic ulcer - 42.25 ± 2.48 ($p < 0.005$). Moreover, the level of IRB for DFS with trophic ulcer was probably different ($p_k < 0.005$) from the control indicators (reference values) too – 128.45 ± 9.02 . The more severe course of DFS with a low level of IRB was confirmed clinically: the occurrence of a trophic ulcer, the increase of local inflammation, the development of phlegmon; and laboratory findings (increase of the level of peripheral blood leukocytes, leukocyte intoxication index, C-reactive protein). The outpatient study of the archival material confirmed the suggested method of predicting the course of DFS: before the appearance of trophic foot ulcer, patients experienced a decrease of IRB. Thus, at the IRB level below 55 e.u. DFS unfavourable course is predicted, and if reduction of IRB to 40-45 e.u. is observed – DFS complicated course with trophic ulcer occurrence is predicted.

Conclusions: The obtained data from clinical observations confirm that the decrease of IRB can serve as a predictor of DFS complicated course.

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NEW APPROACHES TO ASSESSMENT OF PROGNOSIS IN PATIENTS WITH ACUTE CORONARY SYNDROME

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Introduction. Cardiovascular disease is a leading cause of mortality worldwide. It is caused mainly by atherosclerosis, a chronic inflammatory disease of blood vessels wherein the immune response interacts with metabolic disorders to generate and activate endothelium lesions. Much evidence has suggested that chronic inflammation plays a critical role in the pathogenesis of atherosclerosis. Immune cells, including neutrophils, monocytes, lymphocytes, and mast cells infiltrate the atherosclerotic lesions and initiate a cytokine cascade. That is why scientists are trying to find and research new markers of inflammation intensity that are convenient in everyday clinical practice.

The aim of study. To analyze inflammatory indicators based on the absolute count of different inflammatory cells for assessment of prognosis in patients with acute coronary syndrome.

Material and methods. Informational-analytical, content-analysis.

Results. Inflammation is caused by infectious and non-infectious agents. The human body defends itself against them through a passive and active immune responses. The passive response includes all mechanisms that are functionally active all the time, or initiated after the cells are exposed of harmful agents. To assess the intensity of this process, it is proposed to determine lymphocyte to monocyte ratio (LMR), platelet to lymphocyte ratio (PLR), neutrophil to lymphocyte ratio (NLR). These indicators are considered to be inexpensive and easily accessible biomarkers that are associated with increased risk of coronary artery disease, stroke, and overall death. However, the search for a new integral marker that would simultaneously take into account changes in the number of all cells of the immune response continues. Recently, a new indicator has emerged called the systemic inflammatory response index (SIRI). SIRI is a composite index based on the absolute count of neutrophils, monocytes, and lymphocytes, and it is highly associated with cancer, hyperuricaemia, rheumatoid arthritis, and stroke. Elevated SIRI values are related to an increased risk of myocardial infarction (MI) and overall death. However, whether SIRI is an independent risk factor for adverse prognosis in patients with acute coronary syndrome (ACS) is still unknown. The number of ACS patients undergoing percutaneous coronary intervention (PCI) increases annually, so this question remains open. Also one of the new indicators for assessing systemic inflammation is the systemic immune-inflammation index (SII). This parameter is calculated by multiplying the number of platelets and neutrophils divided by the number of lymphocytes. Researchers showed that higher SII values in patients may be correlated with a worse prognosis of different type of